

Title (en)
HIGH-STRENGTH ULTRA-THICK STEEL WITH EXCELLENT CRYOGENIC STRAIN AGING IMPACT TOUGHNESS AT CORE THEREOF, AND METHOD FOR MANUFACTURING SAME

Title (de)
HOCHFESTER ULTRADICKER STAHL MIT AUSGEZEICHNETER KRYOGENER BEANSPRUCHUNGSALTERUNGSSCHLAGZÄHIGKEIT IN SEINEM KERN UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
ACIER ULTRA-ÉPAIS À HAUTE RÉSISTANCE À EXCELLENTE TÉNACITÉ AUX CHOC APRÈS VIEILLISSEMENT SOUS CONTRAINTE CRYOGÉNIQUE AU COEUR DE CELUI-CI ET SON PROCÉDÉ DE FABRICATION

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Application
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Abstract (en)
An aspect of the present invention is to provide high-strength ultra-thick steel with excellent cryogenic strain aging impact toughness at the core thereof, and a method for manufacturing same. An embodiment of the present invention provides high-strength ultra-thick steel with excellent cryogenic strain aging impact toughness at the core thereof, and a method for manufacturing same, the steel comprising, by wt%, 0.02-0.06% of C, 1.8-2.2% of Mn, 0.7-1.1% of Ni, 0.2-0.5% of Mo, 0.005-0.03% of Nb, 0.005-0.018% of Ti, 80 ppm or less of P, 20 ppm or less of S, and the remainder of Fe and other evitable impurities, wherein the average grain size of grains having a high boundary angle of 15 degrees or greater is 15 μ m or less as measured in a range of 3/8t-5/8t in the thickness (t) direction by EBSD.

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